

SN 10/790,638Docket No. S-100,555In Response to Office Action dated March 8, 2007

## REMARKS

1. Claims 1-15 are pending in the present patent application. Claims 1-15, subject to a restriction requirement, are divided into the following two groups:

- I. Claims 1-7, drawn to an apparatus; and
- II. Claims 8-15 drawn to a method for detecting a binding event between biomolecules using a trifunctional linker molecule.

During a phone conversation with the Examiner, Bruce Cottrell, attorney for Applicant, provisionally elected the group I claims. Applicant affirms the election. Please cancel claims 8-15.

2. Claims 1-7 are rejected. No claims are allowed.

3. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements. The omitted structural cooperative relationships are the relationships between the light source, the objective, the two detectors, the two filters, the substrate, and the support having a pinhole.

4. Claim 1 is amended and now recites the relationships between the light source, the objective, the two detectors, the two filters, the substrate, and the support having a pinhole. The relationships between the elements are connected according to the path of the light beam originating from the light source. Accordingly, amended claim 1 recites an apparatus comprising:

a transparent substrate for support of a sample under investigation, and sample comprising membrane vesicles including a trifunctional linker molecule including a fluorophore;

a light source for providing an excitation light beam to excite the sample;

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a first filter means for reflecting the excitation light beam from the light source to an objective and for filtering light received from the sample;

an objective for collecting the reflected excitation beam from said first filter means and sending it through the transparent substrate to the sample;

a support having a pinhole therethrough for directing light filtered by said first filter means to a second filter means;

a second filter means for reflecting a portion of the light received from the pinhole to a first detector means, and for filtering the remainder of the light received through the pinhole;

a first detector means for detecting light reflected from said second filter means; and

a second detector means for detecting light filtered by said second filter means.

With these changes, Applicant respectfully requests that the rejection of claims 1-7 under 35 U.S.C. 112, second paragraph be withdrawn.

5. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Swanson et al. (US 2004/0171175) ("Swanson"). In support of the rejection to claim 1, the Office Action argues that Swanson discloses an apparatus (FIGURE 2 of Swanson) comprising:

- (i) a light source (205);
- (ii) an objective (210);
- (iii) a first detector means for detecting light of a first defined wavelength range (220);
- (iv) a second detector means for detecting light of a second defined wavelength range (215);
- (v) a first filter means for filtering light of a third defined wavelength range (225 and paragraph 34);

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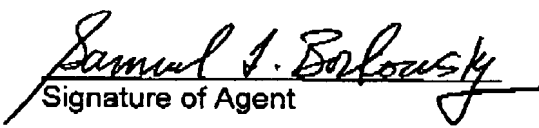
- (vi) a second filter means for filtering light or a fourth defined wavelength range (230 and paragraph 34);
- (vii) a support (232) having a pinhole therein (235) through which collected light from said objective is preferentially passed to said first detector means and said second detector means as opposed to out of focus scattered light (paragraph 35); and
- (viii) a transparent substrate (240) for support of a sample under investigation (245), said sample comprising membrane vesicles including a trifunctional linker molecule including a fluorophore (paragraph 22).

6. Applicant is submitting with this response a declaration under 1.132 from Basil I. Swanson, a coinventor of the presently claimed apparatus. According to the declaration, Basil I. Swanson together with James H. Werner and Scott M. Reed invented the apparatus disclosed but not claimed in US 2004/0171175. This declaration effectively removes US 2004/0171175 as a reference. Please withdraw the rejection of claims 1-7 under 35 U.S.C. 102(e) over Swanson.

9. Applicant respectfully requests that this amendment be entered into the present patent application. For the reasons set forth above, Applicant believe that all currently pending claims are in condition for allowance, and such action at an early date is earnestly solicited. No new matter has been added by the above changes. Reexamination and reconsideration are respectfully requested.

Respectfully submitted,

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